Status Report 3 – March 14th, 2019

This report is to provide an update on the progress of the EZ Tracker project to date. Its main focus is on the integration of the formerly independent hardware and software components into one cohesive unit.

Hardware Progress
As mentioned in the previous report, the PCB has been fully designed to take into consideration the integration of the three sensors. It was subsequently sent to the prototype lab for etching and has since been soldered and integrated into the Pi. However, the headers to accommodate the sensors are yet to be soldered. We are anticipating the design and hardware integration will be fully functional the first time around. To this end, Jonas is continuously working on integrating the sensors into a single working unit. Additionally, we are still contemplating migrating the project to a Pi Zero. However, that consideration is dependent on the success of the PCB integration with the hardware sensors. That will make the migration to a new platform much easier. As it relates to the enclosure, Delroy is in the process of determining placement for a battery pack to power the device independently. Not to mention the added challenge of thinking about a design if we decide to downsize for the Pi Zero.

Challenges
The process of integrating the software with the hardware is a bit tricky. Authenticating the Firebase portion is proving to be tedious, as the guide for Python-Firebase on PyPi's website did not work. After further research however, Pyrebase, a more up-to-date alternative, was the solution Jonas was able to utilize to successfully create an authenticated connection to our database. This portion of the work is proving to be the most time consuming part of the project. However, we are working assiduously to ensure the entire database completion and hardware integration by the end of next week.

Financial Status and Remaining Work
There has been no change to our current financial status as no new purchases have been made. Hence, our budget has remained the same. However, that might change if we decide to migrate the project to the Pi Zero platform. So as it stands, as indicated in our project breakdown schedule, we are currently on track and within budget. By the end of next week, we hope to have the entire project fully integrated and working together as one cohesive unit.

Sincerely,

EZ Tracker Team